

WHAT IS CLAIMED IS:

1. An organic light-emitting device comprising:
an emitting layer made of an organic material generating light by
charge injection;
5 an electrode to supply charges to the emitting layer; and
a diamond-like carbon film between the emitting layer and the
electrode.
2. The organic light-emitting device according to claim 1, wherein
10 the electrode is an anode to supply holes to the emitting layer, further
comprising:
a cathode electrode to supply electrons to the emitting layer;
and
a diamond-like carbon film between the emitting layer and the
15 cathode electrode.
3. The organic light-emitting device according to claim 1, wherein
the electrode includes a material selected from the group consisting of
aluminum and copper.
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4. An organic light-emitting display apparatus comprising:
a substrate;
an emission control circuit formed on the substrate;
an insulating layer covering the control circuit;
25 an organic light-emitting device including a first electrode and a

second electrode, and formed on the insulating layer; and

a contact wiring structure for electrically connecting the emission control circuit and the organic light-emitting device, and including

5 a first conductive layer made of the same material as the first electrode;

a second conductive layer made of the same material as the second electrode; and

a diamond-like carbon film between the first conductive layer and the second conductive layer.

5. The organic light-emitting display apparatus according to claim 4, wherein the first electrode includes a material selected from the group consisting of aluminum and copper.

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6. The organic light-emitting display apparatus according to claim 4, wherein the diamond-like carbon film between the first conductive layer and the second conductive layer contains fluorine.

20 7. The organic light-emitting display apparatus according to claim 4, wherein the light-emitting device includes

a light-emitting layer made of an organic material generating light by charge injection; and

a diamond-like carbon film between the emitting layer and the first electrode.

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8. The organic light-emitting display apparatus according to claim 7, wherein the diamond-like carbon film between the emitting layer and the first electrode contains fluorine.

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9. The organic light-emitting display apparatus according to claim 7, wherein

the first electrode is an anode to supply holes to the emitting layer,

10 the second electrode is a cathode to supply electrons to the emitting layer, and

the light-emitting device further includes a diamond-like carbon film between the emitting layer and the second electrode.

15 10. The organic light-emitting display apparatus according to claim 9, wherein the diamond-like carbon film between the emitting layer and the second electrode contains fluorine.

11. The organic light-emitting display apparatus according to claim 4,
20 wherein the second electrode includes a material with substantially the same work function as the first electrode.

12. The organic light-emitting display apparatus according to claim 4,
wherein the second electrode is made of the same material as the first
25 electrode.

13. The organic light-emitting display apparatus according to claim 4,
wherein

the emission control circuit includes

5 a driver device controlling current supplied to the organic
light-emitting device, and

a switching device controlling the driver device based on
a scan signal and a data signal, and

the contact wiring structure is electrically connected to the driver
10 device.

14. A method of manufacturing an organic light-emitting diode
display apparatus, comprising:

forming an emission control circuit on a substrate;

15 forming an insulating layer to cover the emission control circuit;

depositing on the insulating layer a first conductive layer
electrically connected to the emission control circuit;

depositing a first diamond-like carbon layer on the conductive
layer;

20 etching the first conductive layer and the first diamond-like
carbon layer with a common mask to divide the first conductive layer
into a first layer and a second layer, to divide the first diamond-like
carbon layer into a first diamond-like carbon film on the first layer and a
second diamond-like carbon film on the second layer; and

25 forming on the second diamond-like carbon film an emitting

layer made of an organic material generating light by charge injection.

15. The method according to claim 14, further comprising
depositing a second diamond-like carbon layer over the emitting
5 layer and the first diamond-like carbon film; and
depositing a second conductive layer on the second
diamond-like carbon layer.

16. The method according to claim 15, further comprising
10 etching the second conductive layer and the second
diamond-like carbon layer with a common mask.

17. The method according to claim 15, wherein
the depositing of the second diamond-like carbon layer and the
15 depositing of the second conductive layer include depositing under a
temperature lower than a glass transition temperature of the organic
material.

18. A method of manufacturing an organic light-emitting diode
20 display apparatus, comprising:
forming an emission control circuit on a substrate;
forming an insulating layer to cover the emission control circuit;
forming an electrode on the insulating layer;
forming on the insulating layer a first conductive layer
25 electrically connected to the emission control circuit;

forming on the electrode an emitting layer made of an organic material generating light by charge injection;

depositing a diamond-like carbon layer over the first conductive layer and the emitting layer; and

- 5 depositing a second conductive layer on the diamond-like carbon layer.